



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/581,289

06/01/2006

Michel Serillon

1759.222

3168

23405

7590

09/15/2009

HESLIN ROTHENBERG FARLEY & MESITI PC
5 COLUMBIA CIRCLE
ALBANY, NY 12203

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,289	Applicant(s) SERILLON, MICHEL	
	Examiner Norca L. Torres-Velazquez	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,9-12 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,9-12 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 17, 2009 has been entered.

Response to Amendment

2. Claims 2, 4-8 and 13-15 have been canceled.
3. Claims 1, 3, 9-12 and 16 have been amended. No new matter was found.
4. New claims 17-22 have been entered. No new matter was found.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 1, 5, 9-11, 16-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over CLAEIJS (WO 97/37835).**

The CLAEIJS reference teaches a woven cloth based on high-tenacity yarns used for reinforcing parts that comprise weft threads arranged in a weft direction that are not perpendicular to warp threads. (Abstract) The reference teaches that the second layer in the reinforcement material lies at an angle relative to the first layer of between substantially 60° and 120°. (Refer to col. 2, lines 20-31) In Example 1, the reference teaches an embodiment that comprises a woven fabric that have the weft threads at an angle of 45° and a second woven fabric with the same composition laid in reversed position onto the first woven fabric. The first layer

Art Unit: 1794

and the second layer are mutually bonded by means of an adhesive. (Refer to page 5, Example

1) The reference further teaches the use of glass fiber material for the construction of the filament bundles and of the warp threads. (Refer to page 3, lines 33-37) With regards to claim 10, the reference teaches using thermoplastic or thermosetting powder or a glue to bond the layers. The reference further teaches using thermosetting resins such as polyester, epoxy and phenol to impregnate the material. (Refer to page 3, lines 9-10 and 25-27)

It is the Examiner's position that the construction described in Example 1 provides for the reinforcing part of the present invention that comprises a first woven layer joined to a second woven layer. It is the Examiner's interpretation that when the second woven fabric is laid in a reversed position onto the first woven fabric will provide for the first weft threads and second weft threads in symmetry to each other as claimed in the present invention.

With regards to claim 16, it is noted that the reference is not limited to two layers, it teaches that two or more layers can be mutually fixed. (Refer to page 3, lines 4-9; page 4, lines 5-16; Example 3)

With regards to the claimed ratio $T_c \cdot D_c / T_t \cdot D_t$; it is noted that on Examples 1 and 3 the reference discloses a woven fabric made with 3.5 glass fibers of 68 tex in the warp and 2.4 glass rovings of 600 tex in the weft, the weft threads are displaced relative to the warp threads such that an angle of 45° is formed between the two. The warp has a basis weight of 50 gsm and the weft a basis weight of 200 gsm. (Refer to Pages 5 and 6) Based on the information provided in the examples the $T_c \cdot D_c / T_t \cdot D_t$ is of about 0.12. It is further noted that the reference teaches that the width, angle and weight of the material can be varied as desired and that heavier threads can be used whereby the material can be less expensive. (Refer to page 4, lines 19-27) "[W]here

Art Unit: 1794

the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) Thus, variations in variables of width, angle and weight of the material would provide variations in the claimed ratio. It is the Examiner’s position that one having ordinary skill in the art will find obvious to optimize the values of the material depending on the intended use or the desirable properties in the material. It is well settled that determination of optimum values of cause effective variables such as linear density is within the skill of one practicing the art. In re Boesch, 205 USPQ 215 (CCPA 1980). Thus, it would have been obvious to one having ordinary skill in the art to provide a woven cloth of the present invention and provide it with warp threads that have a higher linear density motivated by the desire of providing a product that will have higher strength in the warp directions and would meet the claimed ratio of $T_c \cdot D_c / T_t \cdot D_t$. It is further noted that the reference teaches angles that range from 30° to 60°. (Refer to claim 3)

7. Claims 3, 12, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over CLAEIJS (WO 97/37835) as applied above, and further in view of INOBUCHI et al. (US 5,168,006).

While CLAEIJS teaches woven constructions, it fails to specifically teach the use of a twill weave.

INOBUCHI et al. also relates to a woven fabric used for production of fiber-reinforced thermoplastic resin laminates in which the reinforcement yarn comprise glass-fibers and are woven in a plain weave, specifically basket or twill weave. (Refer to Abstract; Col. 2, lines 35-57)

Art Unit: 1794

It would have been obvious to one having ordinary skill in the art of fiber-reinforced laminate by compression molding of woven fabrics that have been shown to have high strength as taught by INOGUCHI et al. (Abstract)

Response to Arguments

8. Applicant's arguments filed August 17, 2009 have been fully considered but they are not persuasive.

a. With regards to arguments regarding Examples 1 and 3 of the CLAEJIS reference, it is noted that while the examples show a preferred embodiment with an angle of 45°, the disclosure teaches ranges of 30° to 60° that encompass the values now claimed. (Refer to page 2, lines 20-38)

b. With regards to arguments regarding a three-layer reinforcing structure, it is noted that the reference is not limited to two layers; it teaches that two or more layers can be mutually fixed. (Refer to page 3, lines 4-9; page 4, lines 5-16; Example 3)

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Norca L. Torres-Velazquez/
Primary Examiner, Art Unit 1794

September 12, 2009